134400-1

REMARKS

Claims 1-37 are pending in the present Application. Claims 1-4, 8-10, 12, 14-19, 21, 24, 26, 32-33, 35, and 37 have been amended, leaving Claims 1-37 for consideration upon entry of the present Amendment. The Specification has been amended to correct certain typographical errors. No new matter has been introduced by these amendments. Reconsideration and allowance of the claims is respectfully requested in view of the above amendments and the following remarks.

Claim Objections

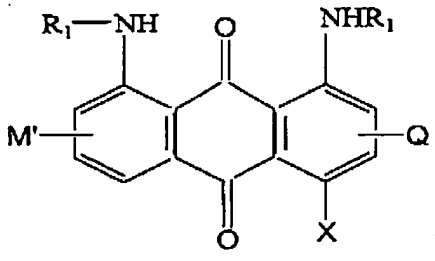
Claims 1-4, 8-10, 12, 14-15, 17-19, 21, 24, 32, 33, and 37 were objected to due to the nomenclature of "1,8-anthraquinone derivative." The claims have been amended to contain the term "1,8-diaminoanthraquinone" derivative. Removal of the objections is respectfully requested.

Claim Rejections Under 35 U.S.C. § 102(b)

Claims 1-26, 28-30, and 37 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by US Patent No. 4,863,634 to Claussen et al. ("Claussen"). Applicants respectfully disagree.

To anticipate a claim, a reference must disclose each and every element of the claim. *Lewmar Marine v. Varient Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987).

Claussen generally discloses anthraquinone dyestuffs. A general anthraquinone that is disclosed includes formula IIb in which X is OR_2 (herein generally described as a hydroxy or alkoxy substituent) or NHR_2 (generally described herein as an amino substituent) and R_2 is H, alkyl, cycloalkyl, aryl or aralkyl. (See Col. 1, line 6 to Col. 2, line 19)



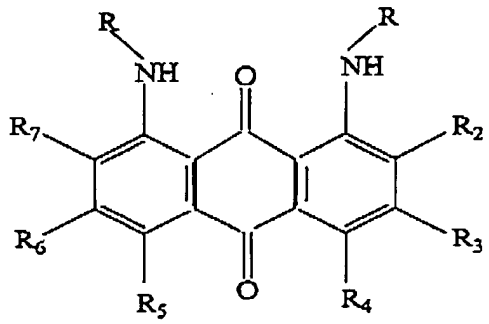
IIb

134400-1

The X substituent is at the 4 or 5 position on the anthraquinone ring structure, with -NHR_1 at the 1 and 8 positions. Therefore, Claussen does not teach an anthraquinone containing a substituent, at either the 4 or 5 position, other than a hydroxy, alkoxy, or amino substituent. No other substituent is taught or suggested for X.

Independent claims 1 and 37 of the present application require "a 1,8-diaminoanthraquinone derivative having a purity of greater than or equal to about 90 wt%." Claussen fails to teach or suggest a 1,8-diaminoanthraquinone derivative having a purity level as required by claims 1 and 37. As Claussen fails to teach each and every claim element of claims 1 and 37, the claims are not anticipated by the reference. Claims 2-23, 28, and 29 all ultimately depend from claim 1 and, therefore, are not anticipated according to the argument above.

Independent claim 24 is directed to a colored polymeric resin composition containing a 1,8-diaminoanthraquinone derivative having a Formula (VIII):



(VIII)

wherein R_2 - R_7 are, individually, selected from the group consisting of a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a halogen atom, a cyano group, a nitro group, $-COR_9$, $--COOR_9$, $--NR_{10}COR_{11}$, $--NR_{10}SO_2R_{11}$, $--CONR_9R_{10}$, $--CONHSO_2R_{11}$, and $--SO_2NHCOR_{11}$; in which R_9 and R_{10} are, individually, selected from the group consisting of a hydrogen atom, an aliphatic group, an aromatic group, and a heterocyclic group; wherein R_{11} is selected from the group consisting of an aliphatic group, an aromatic group, and a heterocyclic group. As amended, claim 24 does not contain a hydroxy, alkoxy, or amino substituent at the 4 or 5 positions (R_4 and R_5), rather the substituent is a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a halogen atom, a cyano group, a nitro group, $--COR_9$, --

134400-1

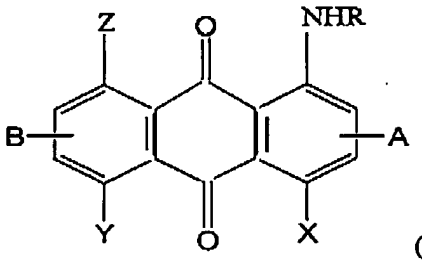
$COOR_9$, $--NR_{10}COR_{11}$, $--NR_{10}SO_2R_{11}$, $--CONR_9R_{10}$, $--CONHSO_2R_{11}$, or $--SO_2NHCOR_{11}$. A 1,8-diaminoanthraquinone containing such substitution is not taught or suggested by Claussen. Accordingly, claim 24 as amended is not anticipated by the reference. Claim 30 is dependent upon claim 24 and is therefore also not anticipated by Claussen. The Applicants respectfully request reconsideration and removal of the rejections to claims 1-26, 28-30, and 37.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 27 and 31 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Claussen in view of US Patent No. 5,747,632 to Adachi et al. ("Adachi"). Claims 32-36 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Claussen in view of US Patent No. 3,923,4545 to Genta ("Genta"). Applicants respectfully disagree.

Adachi generally discloses polycarbonate resin with high flowability having a viscosity average molecular weight (Mv) of 13,000 to 20,000 and containing below 1% by weight of low molecular weight carbonate compounds having the range of molecular weight 1,000 or below and at least 10% by weight of a polycarbonate oligomer having the range of molecular weight 2,000 to 5,000 and a process for producing the same.

Genta generally discloses anthraquinones produced through the treatment of an intermediate anthraquinone with benzenesulfonyl chloride in the presence of aluminum chloride to produce compounds suitable for the dyeing of polyester materials and for the coloration of rigid plastic materials. A general anthraquinone that is disclosed includes formula (I)



(I)

wherein R is hydrogen or lower alkyl; two of X, Y and Z are independently hydroxy, amino or lower alkylamino; and the other of X, Y and Z is independently hydrogen, hydroxy, amino, nitro, or lower alkylamino. (Emphasis added; See Col. 1, line 45-55) The X and Y substituents are at

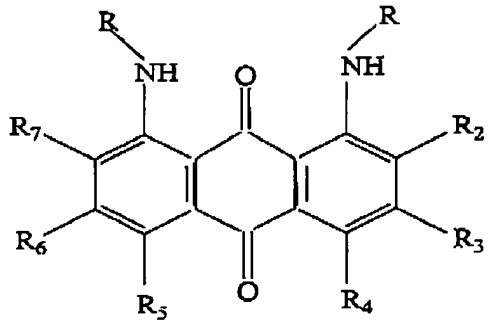
134400-1

the 4 and 5 positions on the anthraquinone ring structure. Therefore, when Z is amino or lower alkylamino, X or Y is hydroxy, amino or lower alkylamino.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Claims 27 and 31 both ultimately depend from independent claim 1. As mentioned above, claim 1 requires a "1,8-diaminoanthraquinone derivative having a purity of greater than or equal to about 90 wt%." Claussen fails to teach or suggest a 1,8-diaminoanthraquinone derivative having a purity level as required by claim 1, and therefore claims 27 and 31. Furthermore, Adachi does not teach or suggest a 1,8-diaminoanthraquinone, let alone one that has a purity of greater than or equal to about 90 wt%. As neither reference teaches or suggests each and every claim element of claims 27 and 31, a prima facie case of obviousness has not been established.

Independent claim 32 is directed to a method of making a colored polymeric article, wherein a composition containing a 1,8-diaminoanthraquinone derivative is formed into an article. The 1,8-diaminoanthraquinone derivative has the structure



(VIII)

wherein R_2 - R_7 are, individually, selected from the group consisting of a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a halogen atom, a cyano group, a nitro group, --COR_9, --$COOR_9$, --$NR_{10}COR_{11}$, –$NR_{10}SO_2R_{11}$, --$CONR_9R_{10}$, –$CONHSO_2R_{11}$, and –

134400-1

SO_2NHCOR_{11}; in which R_9 and R_{10} are, individually, selected from the group consisting of a hydrogen atom, an aliphatic group, an aromatic group, and a heterocyclic group; wherein R_{11} is selected from the group consisting of an aliphatic group, an aromatic group, and a heterocyclic group. As amended, claim 32 does not contain a hydroxy, alkoxy, or amino substituent at the 4 or 5 positions (R_4 and R_5), rather the substituent is a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a halogen atom, a cyano group, a nitro group, $--COR_9$, $--COOR_9$, $--NR_{10}COR_{11}$, $--NR_{10}SO_2R_{11}$, $--CONR_9R_{10}$, $--CONHSO_2R_{11}$, or $--SO_2NHCOR_{11}$. An anthraquinone containing such substitution is not taught or suggested by Claussen. Genta also does not teach or suggest such an anthraquinone. The anthraquinones of Genta according to formula (I) require at least one of X or Y to be a hydroxy, amino or lower alkylamino. Genta does not teach or suggest anthraquinones having any other substituent at these positions. Accordingly, claim 32, and dependent claims 33-36, as amended are not rendered obvious by Claussen and Genta. The Applicants respectfully request reconsideration and removal of the rejections to claims 27, 31, and 32-36.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 07-0862.

Respectfully submitted,

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